

GEORGE B. HAMLIN.

Improvement in Thrashing-Machines.

No. 127,872.

Patented June 11, 1872.

Fig. 1.

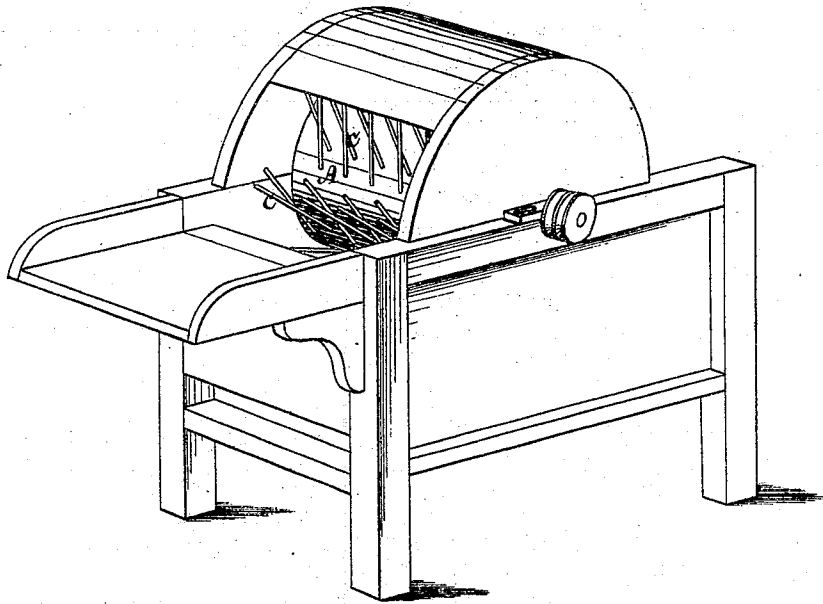
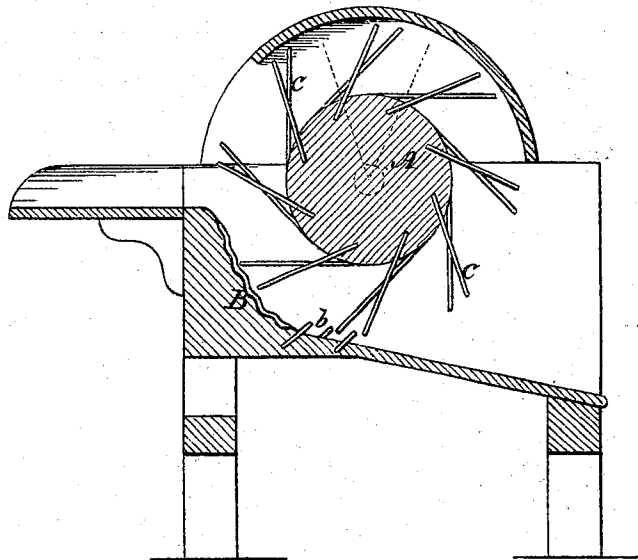


Fig. 2.



Witnesses

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GEORGE B. HAMLIN, OF WILLIMANTIC, CONNECTICUT.

IMPROVEMENT IN THRASHING-MACHINES.

Specification forming part of Letters Patent No. 127,872, dated June 11, 1872.

To all whom it may concern:

Be it known that I, GEORGE B. HAMLIN, of Willimantic, in the county of Windham and State of Connecticut, have invented a certain new and useful Improvement in Thrashing-Machines.

My invention consists in the combination, with a concave bed, of a cylinder provided with elastic beaters, which are so arranged with relation to the cylinder, and so attached thereto, that the thrashing operation is executed by them in a novel and a satisfactory manner; and I do hereby declare that the following specification, taken in connection with the drawing furnished and forming a part of the same, is a clear and true description of a machine involving my invention.

Referring to the drawing, Figure 1 represents one of my machines in perspective. Fig. 2 represents the same in longitudinal vertical section.

A denotes the thrashing-cylinder; it is mounted on a suitable driving-shaft, and supported in a cased frame adapted to the purpose; its journal-boxes are slotted, and are capable of being adjusted longitudinally on the frame. B denotes the concave bed; its interior curved line or face is slightly eccentric to the circumferential line of the cylinder. The bed may be made in sections, and each section provided with a means for adjusting it with relation to the cylinder, or it may be made as shown, and fixed to the frame of the machine. The inner surface of the bed is represented as corrugated in lines parallel with the axial line of the cylinder. Instead of this form the corrugations may be in short sections, and broken or separated, so as to present suitable resistance to the passage of the straw, &c., during the operation of thrashing. Diamond-shaped projections will, by presenting their several angles, be found of special value in this connection. Simple pins or studs have also proven effective in the beds of thrashing-machines, and are employed by me in this instance below the cylinder, adjacent to the delivery-aperture *b*. C denotes, in each instance, an elastic beater, many of which are attached to the periphery of the cylinder. These beaters may be composed of rattan, whalebone, or even steel; in the latter case it will be desirable to

tip them with extensions of elastic vulcanized rubber.

In the drawing these beaters are represented as if attached to the cylinder in two different methods in alternate rows lengthwise of the cylinder, although the rows may be set on spiral lines instead. One-half of the beaters are represented as if attached to the cylinder on a true tangential line, or at right angles to a vertical or radial line which might be drawn through the sectional axis of the cylinder. The other half of the beaters are set at an angle of, say forty-five degrees, or half way between the right-angled tangential line and a true radial line. It is not essential that the two sets be employed, for all may be mounted at the same angle. The outer ends of the two sets of beaters may occupy the same general circumferential line, as shown, or each set may have a line peculiar to itself, and so act independently upon the grain when interposed between them and the bed-plate with varying degrees of force. When the cylinder revolves the several beaters have a drawing spring contact of their ends and a portion of their sides with the straw, interposed between them and the bed, and by such contact and the contact of the frictional surface of the bed the thrashing operation is accomplished. The machine may be fed direct into the mouth, or the well-known continuous feed-apron may be employed.

It will be readily understood that in thrashing-machines as heretofore constructed great speed has been essential to secure their proper operation. To attain and maintain high speed a very considerable amount of motive power is always requisite; with high speed follows the attendant danger of ignition by friction, of the discharge of teeth and of stones, &c., carelessly introduced, after the manner of murderous projectiles, for it is a well-known fact that many serious injuries and even deaths have occurred from such causes.

It has been my aim to produce a machine which, while it would not thrash as rapidly, would operate equally as well at a low speed as at a high rate of speed, and also one which would at the same time be well adapted to the use of small farmers, and capable of shelling peas, beans, and other similar produce.

By using the long elastic beaters the straw crops may be readily thrashed, and by their use the pod crops may also be thrashed without injury to the berry.

In operation, the beaters readily engage with the straw, &c., when introduced into the mouth of the machine, and discharge it freely after having been thrashed.

I am aware that leather beaters have heretofore been employed; but as they depended upon centrifugal force for proper execution, a high rate of speed was essential. I am also aware that wide-toothed steel plates or arms have been employed with thrashing or hulling-machine cylinders; but I am not aware that prior to my invention elastic beaters of the

character herein described have ever been used in a similar connection.

I claim—

The thrashing-cylinder A, provided with the several series of elastic beaters C, set tangentially thereto, in combination with a concave bed, provided with a frictional surface, the two being set with relation to each other so that the thrashing operation will be executed by the drawing contact of the sides and ends of the beaters and the surface of the bed, substantially as described.

GEORGE B. HAMLIN.

Witnesses:

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